TITLE: FLEXIBLE TAPE ELECTRONICS PACKAGING AND METHODS OF MANUFACTURE INVENTORS NAME: Ajit V. Sathe

SERIAL NO.: 09/893,036

1/12

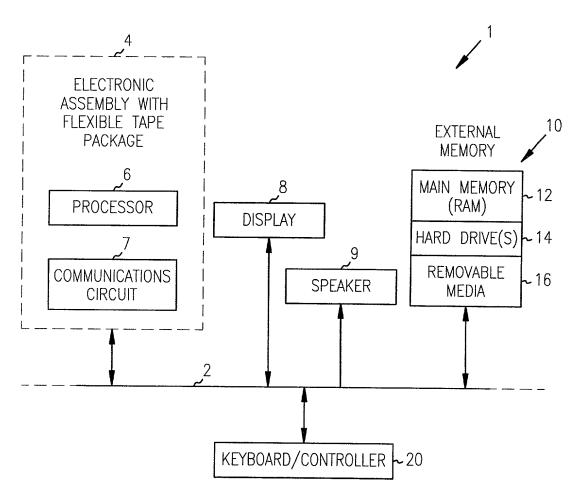
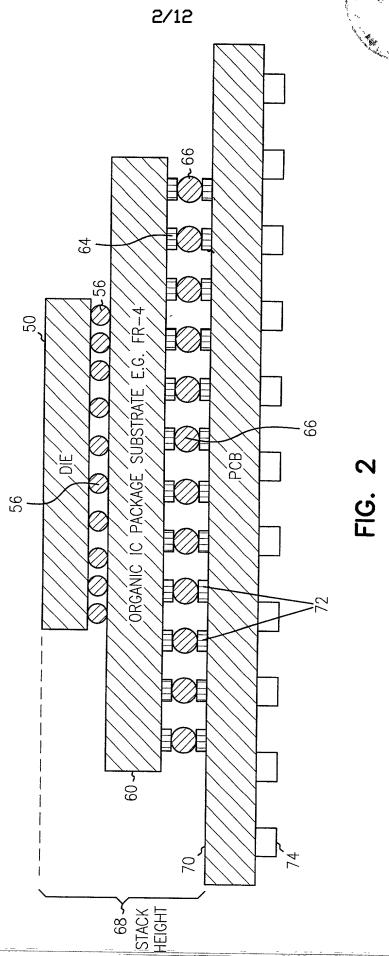


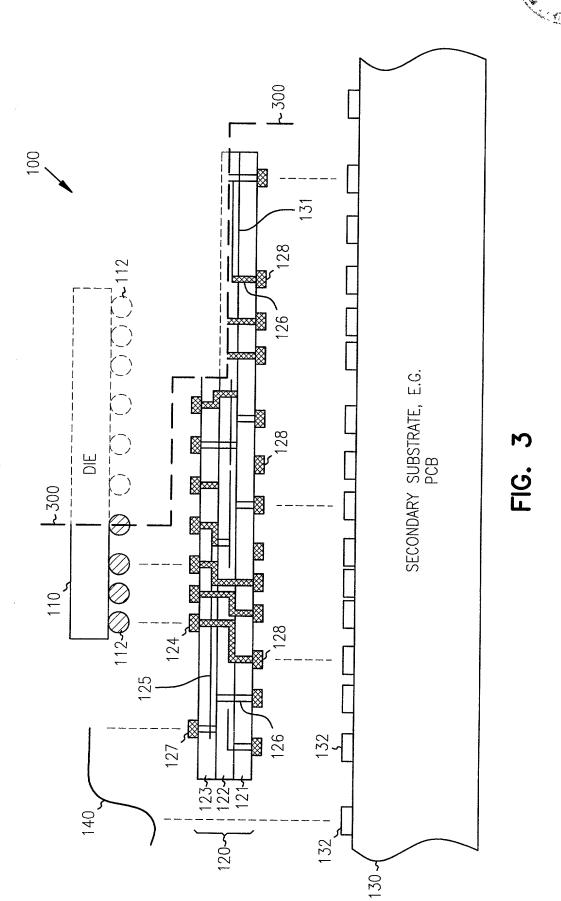
FIG. 1



the Last of the Lot of the Lot of the Control

SERIAL NO.: 09/893,036

3/12

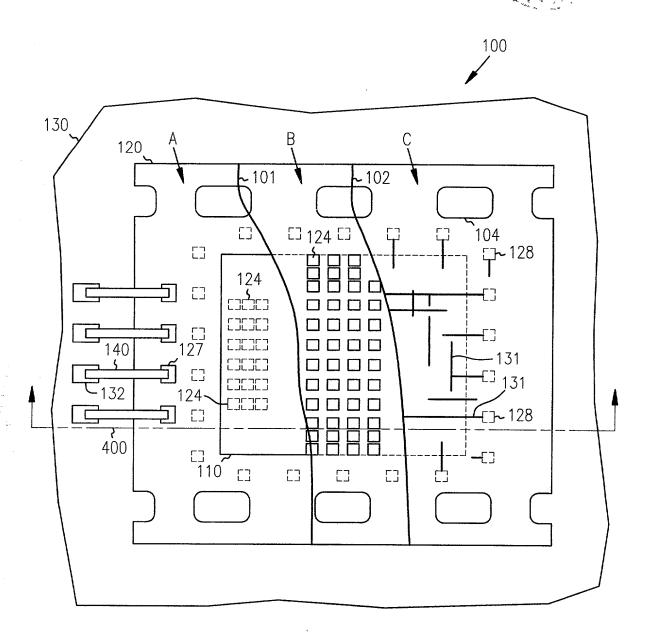


The first party spring spring range party was the first

TITLE: FLEXIBLE TAPE ELECTRONICS PACKAGING AND METHODS OF MANUFACTURE INVENTORS NAME: Ajit V. Sathe

SERIAL NO.: 09/893,036

4/12



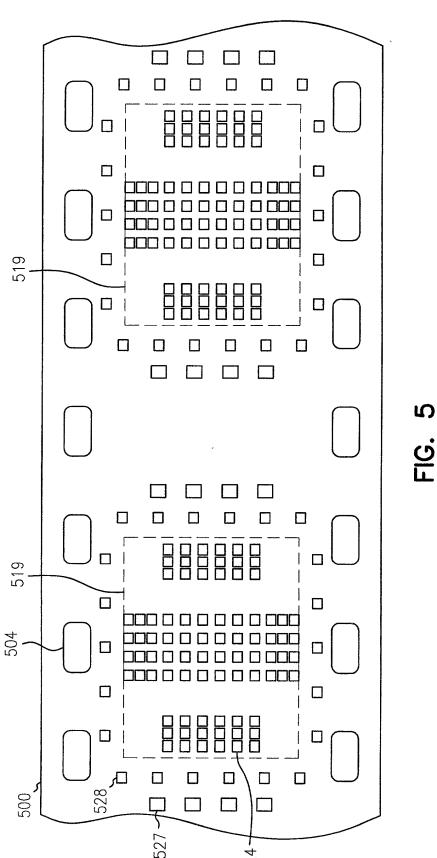
The state of the state was been used been

Marie The Brain Street Wash

FIG. 4

INVENTORS NAME: Ajit V. Sathe SERIAL NO.: 09/893,036

5/12

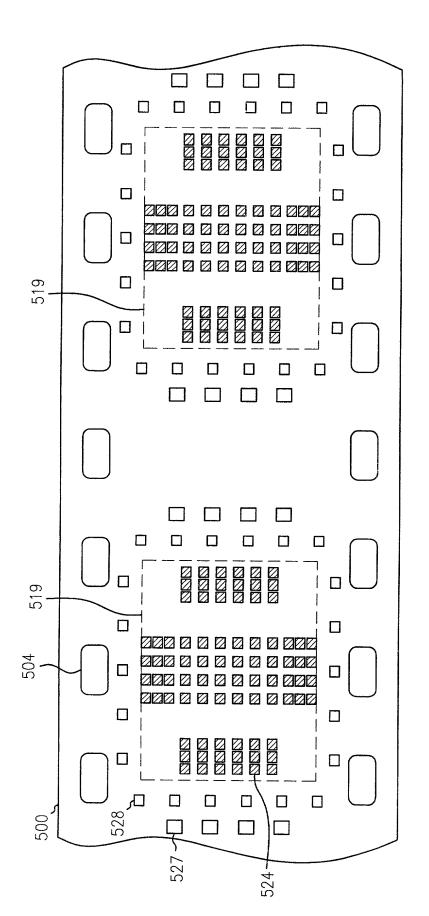


The first last was that the first

He had adia hand had had had

INVENTORS NAME: Ajit V. Sathe SERIAL NO.: 09/893,036

6/12



The first that the first that the first that

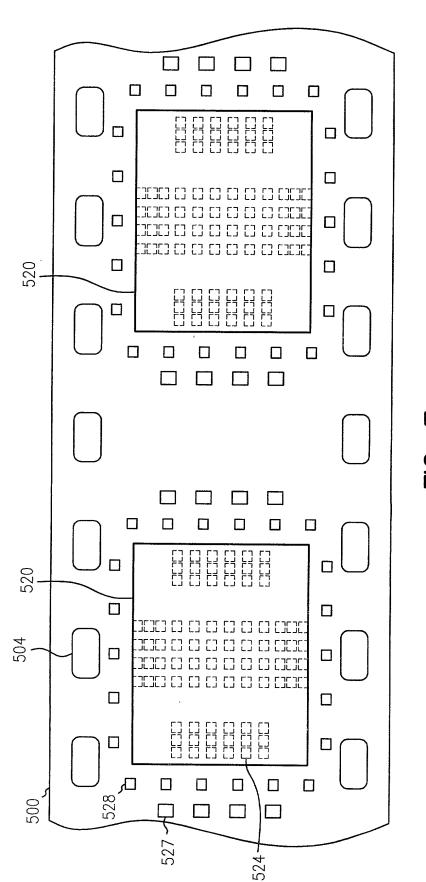
The state of the s

FIG. 6

- ...

SERIAL NO.: 09/893,036

7/12

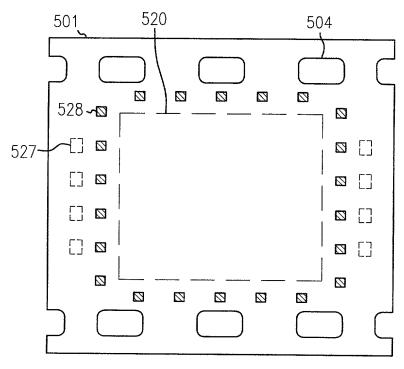


The state of the s

FIG. 7

SERIAL NO.: 09/893,036

8/12



the first that they was first and first and floor

West of Bull Bull Bull Bull Bull Bull

FIG. 8

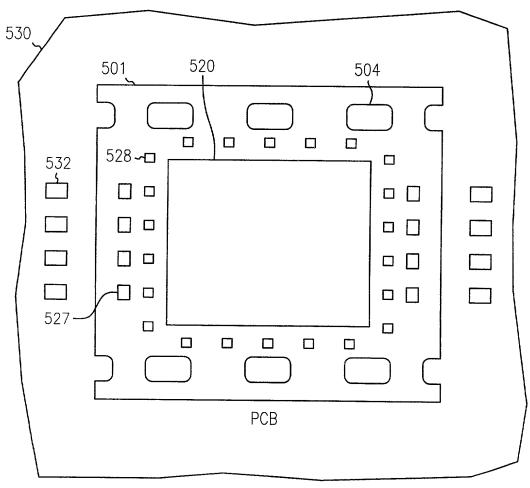
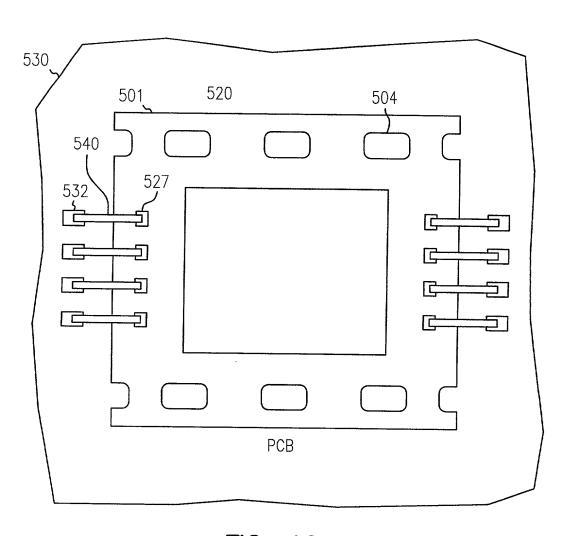


FIG. 9

9/12



that that that the cond that cold that

What whe had that had had

FIG. 10

TITLE: FLEXIBLE TAPE ELECTRONICS PACKAGING AND METHODS OF MANUFACTURE INVENTORS NAME: Ajit V. Sathe

SERIAL NO.: 09/893,036

10/12

METHOD OF MAKING A FLEXIBLE IC PACKAGE SUBSTRATE

602

METHOD OF MAKING A FLEXIBLE IC PACKAGE SUBSTRATE

- THE SUBSTRATE IS FORMED OF MATERIAL SUCH AS A POLYMERIC FILM, POLYIMIDE, POLYESTER, POLYPARABANIC ACID, EPOXY, FIBERGLASS, OR COMBINATION THEREOF
- THE SUBSTRATE HAS A CONDUCTOR REGION ADAPTED TO MOUNT AN IC
- THE SUBSTRATE CAN INCLUDE FROM 1 TO N LAYERS
- THE SUBSTRATE CAN COMPRISE SPROCKET HOLES OUTSIDE THE CONDUCTOR REGION

604

FORM A PLURALITY OF TRACES IN THE CONDUCTOR REGION

- THE TRACES CAN BE FORMED ON DIFFERENT LAYERS

606

FORM A PLURALITY OF LANDS COUPLED TO CERTAIN TRACES

- LANDS CAN BE FORMED ON OPPOSITE, SURFACES OF THE SUBSTRATE
- LANDS CAN BE ARRANGED IN A BALL GRID ARRAY

608

FORM SOLDER BALLS ON THE PLURALITY OF LANDS

- THE SOLDER BALLS CAN BE FORMED ON DIFFERENT GROUPS OF THE LANDS, E.G. A FIRST SET TO COUPLE TO AN IC, A SECOND SET TO COUPLE TO A PCB

END)~610

FIG. 11

SERIAL NO.: 09/893,036

11/12

METHOD OF MAKING AN ELECTRONIC ASSEMBLY

702

700

 THE SUBSTRATE IS FORMED OF MATERIAL SUCH AS A POLYMERIC FILM, POLYIMIDE, POLYESTER, POLYPARABANIC ACID, EPOXY, FIBERGLASS, OR COMBINATION THEREOF

- THE SUBSTRATE HAS A CONDUCTOR REGION
- THE CONDUCTOR REGION INCLUDES A PLURALITY OF TRACES AND A PLURALITY OF LANDS COUPLED TO CERTAIN TRACES
- THE SUBSTRATE CAN INCLUDE FROM 1 TO N LAYERS, EACH COMPRISING A PLURALITY OF TRACES IN THE CONDUCTOR REGION
- THE LANDS CAN BE FORMED ON DIFFERENT LAYERS
- THE SUBSTRATE CAN COMPRISE SPROCKET HOLES OUTSIDE THE CONDUCTOR REGION

704

FORM SOLDER BALLS ON A FIRST SET OF THE LANDS

- THE FIRST SET OF LANDS CAN BE A BALL GRID ARRAY

706

COUPLE PADS OF AN IC TO CORRESPONDING ONES
OF THE FIRST SET OF LANDS

(12B)

FIG. 12A

The second state of the se

TITLE: FLEXIBLE TAPE ELECTRONICS PACKAGING AND METHODS OF MANUFACTURE INVENTORS NAME: Ajit V. Sathe

SERIAL NO.: 09/893,036

12/12

(12A)

708

MOUNT THE SUBSTRATE ON AN ADDITIONAL SUBSTRATE, E.G. A PCB

EMPLOY EITHER OR BOTH OF THE FOLLOWING:

- USE BGA BETWEEN SUBSTRATE AND PCB
 - FORM SOLDER BALLS ON A SECOND SET OF THE LANDS
 - COUPLE ONES OF THE SECOND SET OF LANDS TO CORRESPONDING TERMINALS ON THE PCB
- USE LEADS BETWEEN SUBSTRATE AND PCB
 - COUPLE LEADS, E.G. WIRES, BETWEEN CORRESPONDING ONES OF A THIRD SET OF LANDS AND ADDITIONAL TERMINALS OF THE PCB

END ~710

FIG. 12B

the the first that has the time that the the the the the the the the